



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/525,090 | 03/14/2000 | Walid Ahmed | 12-12-11-9-26 | 9116 |

7590 04/07/2004

Docket Administrator (Rm 3c 512)
Lucent Technologies Inc
600 Mountain Avenue
P O Box 636
Murray Hill, NJ 07974-0636

EXAMINER

PHAM, BRENDA H

ART UNIT PAPER NUMBER

2664

DATE MAILED: 04/07/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/525,090

Applicant(s)

AHMED ET AL.

Examiner

Brenda Pham

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 15, 16 and 19 is/are rejected.
- 7) ☐ Claim(s) 12-14, 17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11, 15-16 and 19 are rejected under 35 U.S.C. 103(a) as being anticipated by **Rahul Jain, Anuj Puri and Raja Sengupta** Department of EECS, University of California, Berkeley, "Geographical Routing Using Partial Information for Wireless Ad Hoc Networks", hereinafter refer to as **Rahul Jain**.

-Regarding claims 1, 5, 7, 9, 10, 15, 19, **Rahul Jain** discloses an apparatus and associated method for use in a node of a network, the apparatus comprising: a memory for storing a location list comprising location information for other nodes of the network, wherein said location information comprises a global position represented by at least two coordinates; and a communication interface for transmitting, at different times, the determined location information of the node, and the stored location list, to at least one other node of the network (see abstract, "The routing table at a node S is a list $\{(P_i, S_i)\}$ where P_i is a geographical position and S_i is a neighbor of node S. When node S

Art Unit: 2664

receives a packet for a node D at position pos (D), it finds the P_i in its routing table which is closest to pos (D) and forwards the packet to the neighbor S_i ."

Rahul Jain assumed each node knows its own position, and can acquire the position of the packet destination by some means.

Rahul Jain does not teach a global positioning system receiver for determining location information of node. This claimed limitation is well known in the art and is admitted by Applicant on page 5 of the specification {It is assumed that each node further comprises global positioning system (GPS) equipment (not shown in FIG. 1), as known in the art, for determining its own location (in two dimensions) on the globe}

Therefore, it would have been obvious to those having ordinary skill in the art at the time of the invention was made to implement a global positioning system (GPS) equipment in Rahul Jain for determining its own location.

-Regarding claims 2, 6, **Rahul Jain** teaches wherein the stored location information further comprises associated time-stamp information for indicating an age of the location information of the other nodes (see figure 9).

-Regarding claims 3, 8, 11, 16, **Rahul Jain** further teaches receiving location information from at least one adjacent node of the network; and merging the received location information with the stored location information to update the stored location information (page 2, third paragraph, "Initially, each node only knows about its neighbors, the routing table at a node S is a list $\{(P_i, S_i)\}$ where P_i is a position and S_i is a

neighbor of S. When node S receives a packet for destination D, it finds the P_i , which is closest to pos (D), the position of D, and forwards the packet to neighbor S_i . The neighbor then repeats the same procedure. In this way, the packet makes its way to destination D. But sometimes when routing a packet, node S may discover that it is closer to the destination than any other position p_i . In this case we say the packet is "stuck" at S. This causes a route discovery protocol to be started. The route discovery protocol finds a path from S to D and updates the routing table of the node k_i on the path by placing the entry {pos (D), k_{i+1} } in its routing table where k_{i+1} is the node which follows k_i on the path."

-Regarding claim 4, **Rahul Jain** further teach wherein the merging compares time-stamp information of said received location information to time-stamp information of said stored location information for determining more current values (see page 15, paragraph 2).

Allowable Subject Matter

5. Claims 12-14, 17-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the prior art made of record does not teach or fairly suggest in combination wherein said node stores a local topology and said node stores said location information of other nodes within and outside said local topology.

Art Unit: 2664

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Fax to:

(703) 872-9314, (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121
Crystal Drive, Arlington VA Sixth Floor (Receptionist)

Art Unit: 2664

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brenda Pham whose telephone number is (703) 308-0148. The examiner can normally be reached on Monday-Friday from 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached on (703) 305-4366.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Brenda Pham

April 1, 2004

A handwritten signature in black ink, appearing to read 'W. Chin', with a long horizontal line extending to the right.

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600